FIG. 1

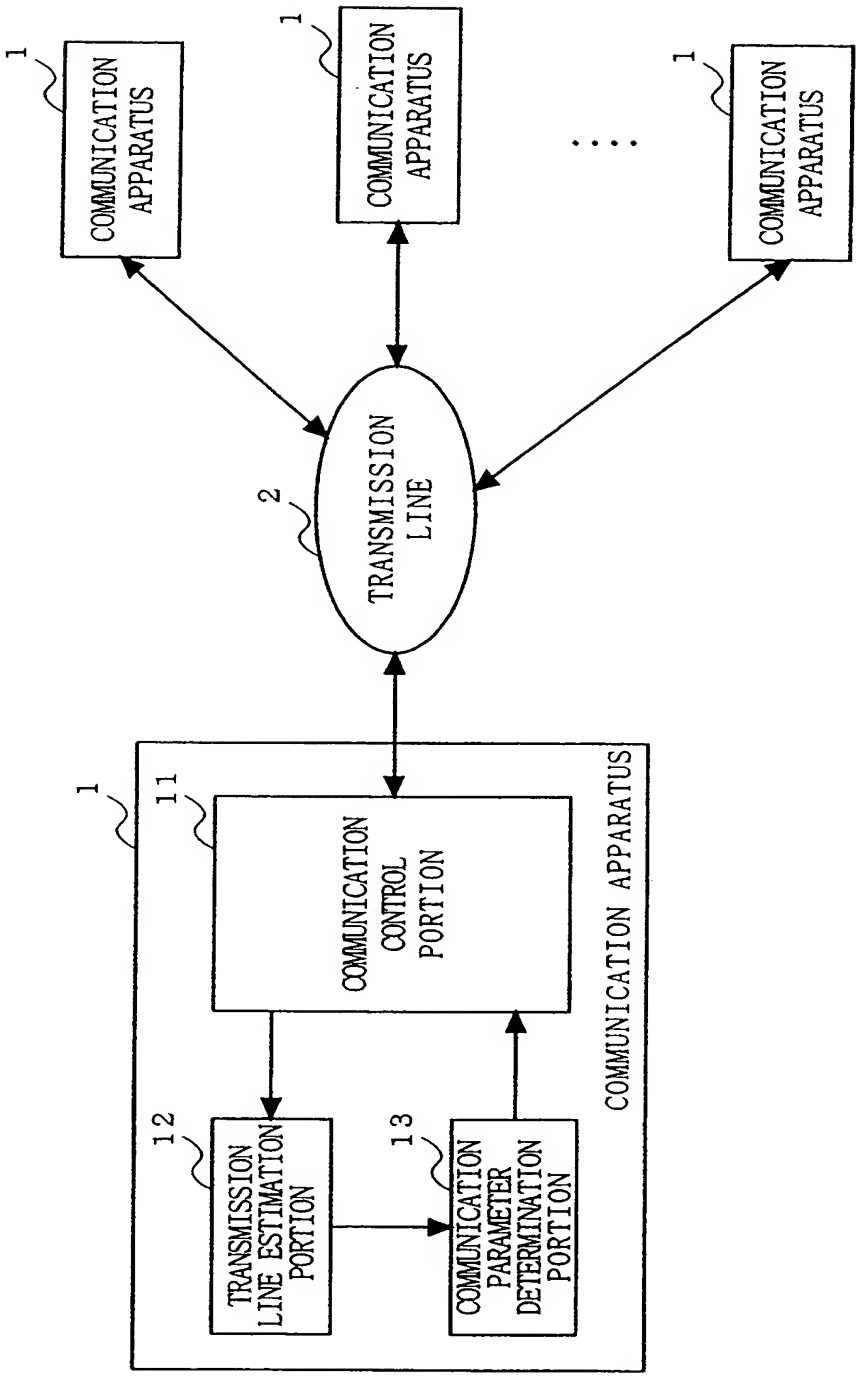

1
COMMUNICATION APPARATUS
1
COMMUNICATION APPARATUS
1
COMMUNICATION APPARATUS
2
TRANSMISSION LINE
1
11
COMMUNICATION CONTROL PORTION
12
TRANSMISSION LINE ESTIMATION PORTION
13
COMMUNICATION PARAMETER DETERMINATION PORTION
COMMUNICATION APPARATUS

FIG. 2

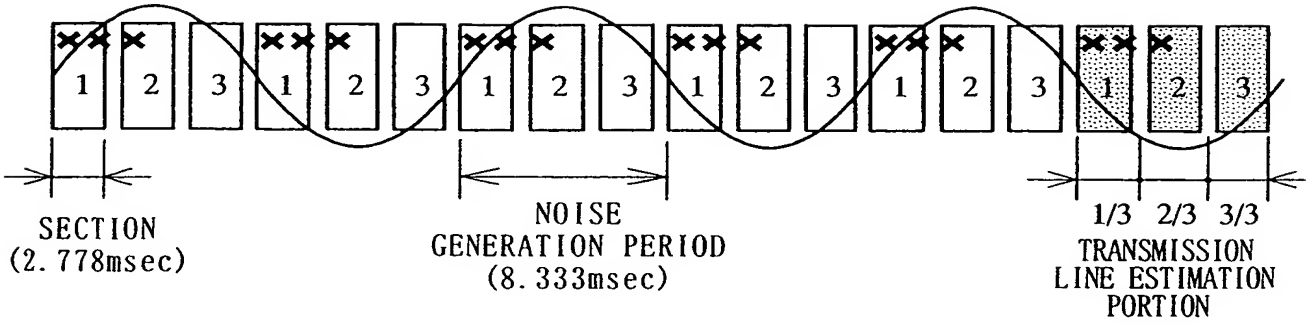

1
2
3
SECTION
(2.778msec)
NOISE
GENERATION PERIOD
(8.333msec)
1/3 2/3 3/3
TRANSMISSION
LINE ESTIMATION
PORTION

FIG. 3

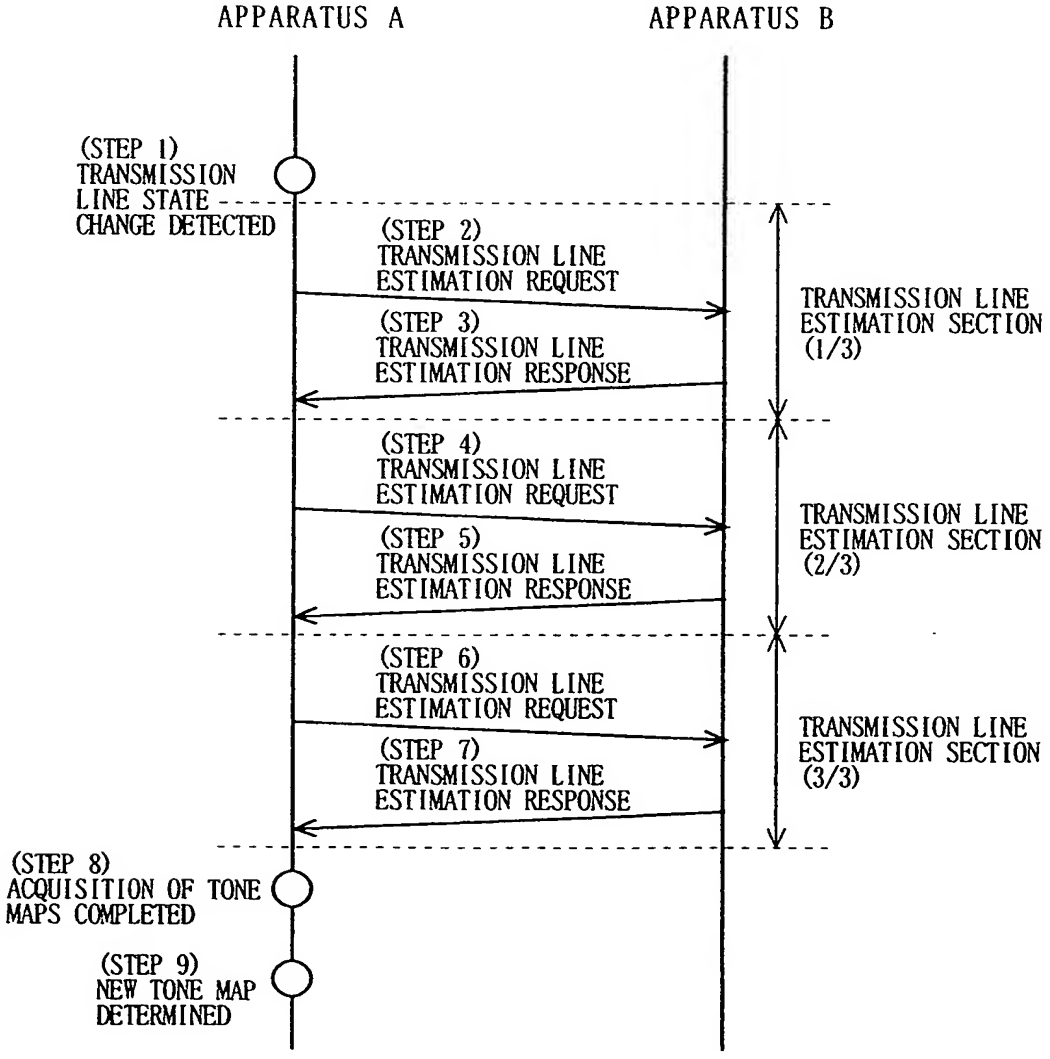

APPARATUS A
APPARATUS B
(STEP 1)
TRANSMISSION
LINE STATE
CHANGE DETECTED
(STEP 2)
TRANSMISSION LINE
ESTIMATION REQUEST
(STEP 3)
TRANSMISSION LINE
ESTIMATION RESPONSE
TRANSMISSION LINE
ESTIMATION SECTION
(1/3)
(STEP 4)
TRANSMISSION LINE
ESTIMATION REQUEST
(STEP 5)
TRANSMISSION LINE
ESTIMATION RESPONSE
TRANSMISSION LINE
ESTIMATION SECTION
(2/3)
(STEP 6)
TRANSMISSION LINE
ESTIMATION REQUEST
(STEP 7)
TRANSMISSION LINE
ESTIMATION RESPONSE
TRANSMISSION LINE
ESTIMATION SECTION
(3/3)
(STEP 8)
ACQUISITION OF TONE
MAPS COMPLETED
(STEP 9)
NEW TONE MAP
DETERMINED

FIG. 4

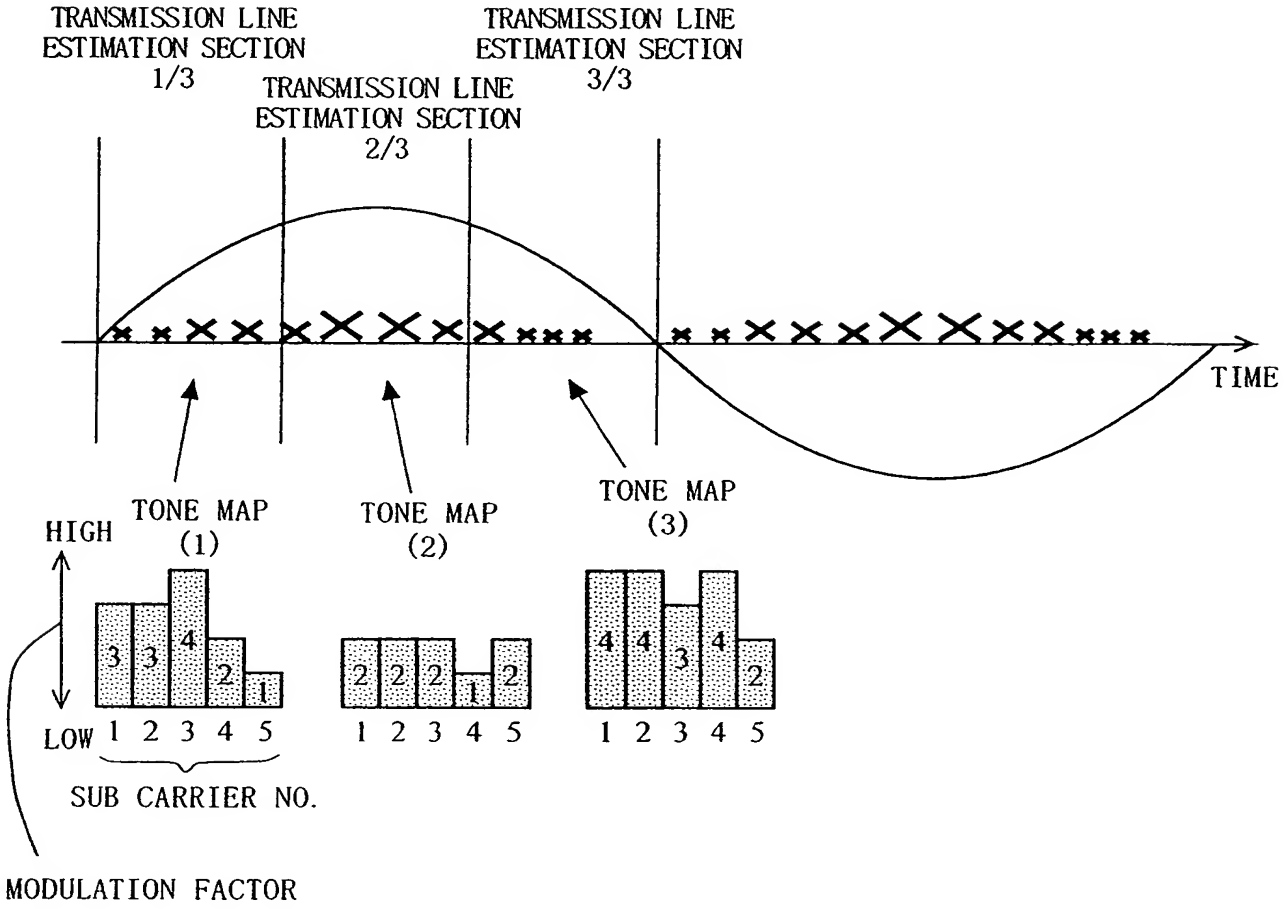


FIG. 5

TONE MAP NO.	PHY RATE [Mbps]	APPLICABILITY COEFFICIENT
1	80	2
2	45	3
3	100	1

FIG. 6

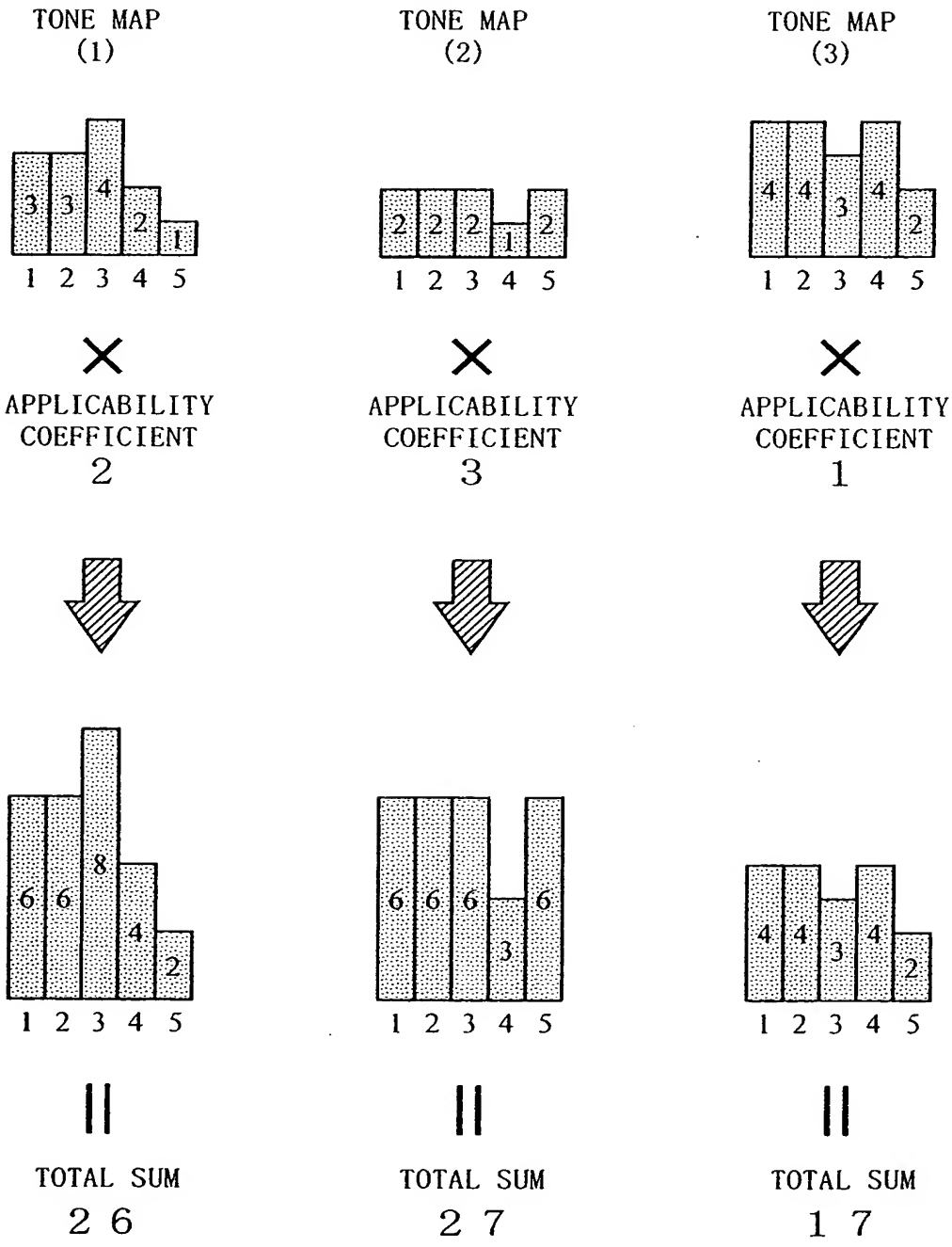
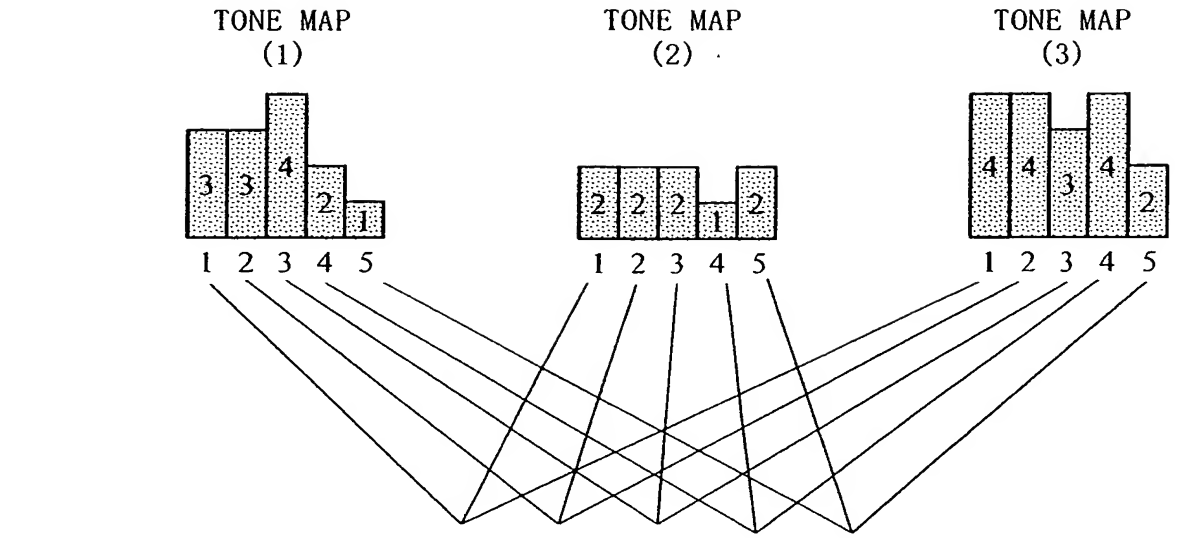
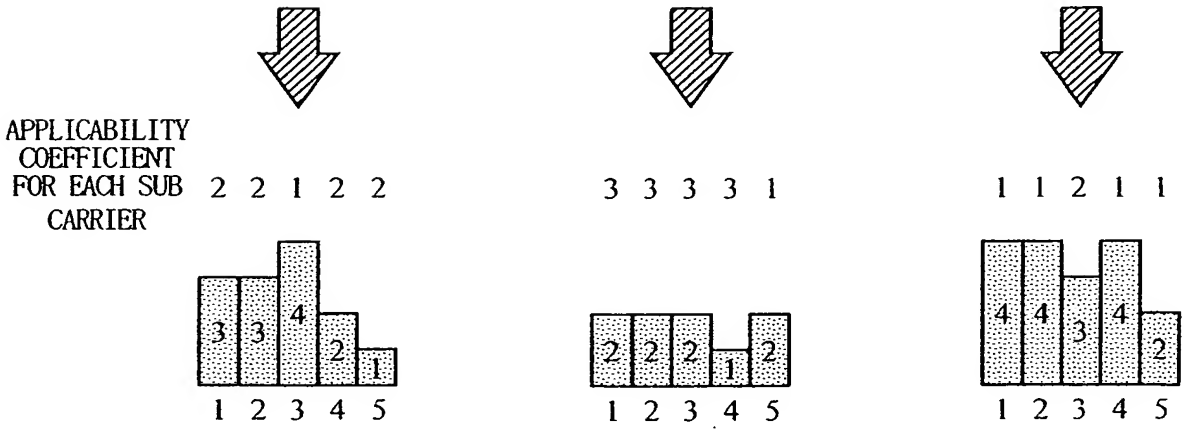

TONE MAP (1)
3 3 4 2 1
1 2 3 4 5
APPLICABILITY COEFFICIENT 2
6 6 8 4 2
1 2 3 4 5
TOTAL SUM 26
TONE MAP (2)
2 2 2 1 2
1 2 3 4 5
APPLICABILITY COEFFICIENT 3
6 6 6 3 6
1 2 3 4 5
TOTAL SUM 27
TONE MAP (3)
4 4 3 4 2
1 2 3 4 5
APPLICABILITY COEFFICIENT 1
4 4 3 4 2
1 2 3 4 5
TOTAL SUM 17

FIG. 7



COMPARED AMONG SUB CARRIERS



TOTAL SUM	TOTAL SUM	TOTAL SUM
22	23	20

FIG. 8A

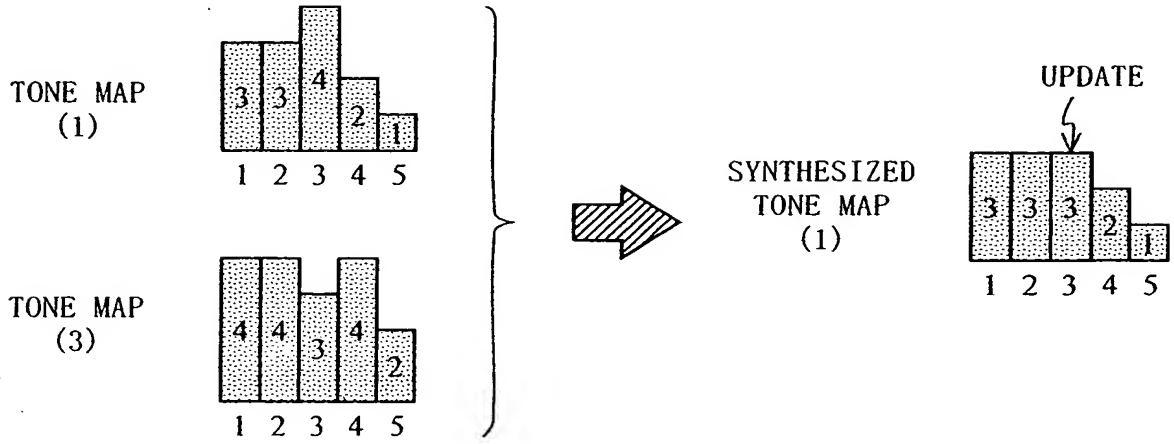

TONE MAP
(1)
3 3 4 2 1
1 2 3 4 5
TONE MAP
(3)
4 4 3 4 2
1 2 3 4 5
SYNTHESIZED
TONE MAP
(1)
UPDATE
3 3 3 2 1
1 2 3 4 5

FIG. 8B

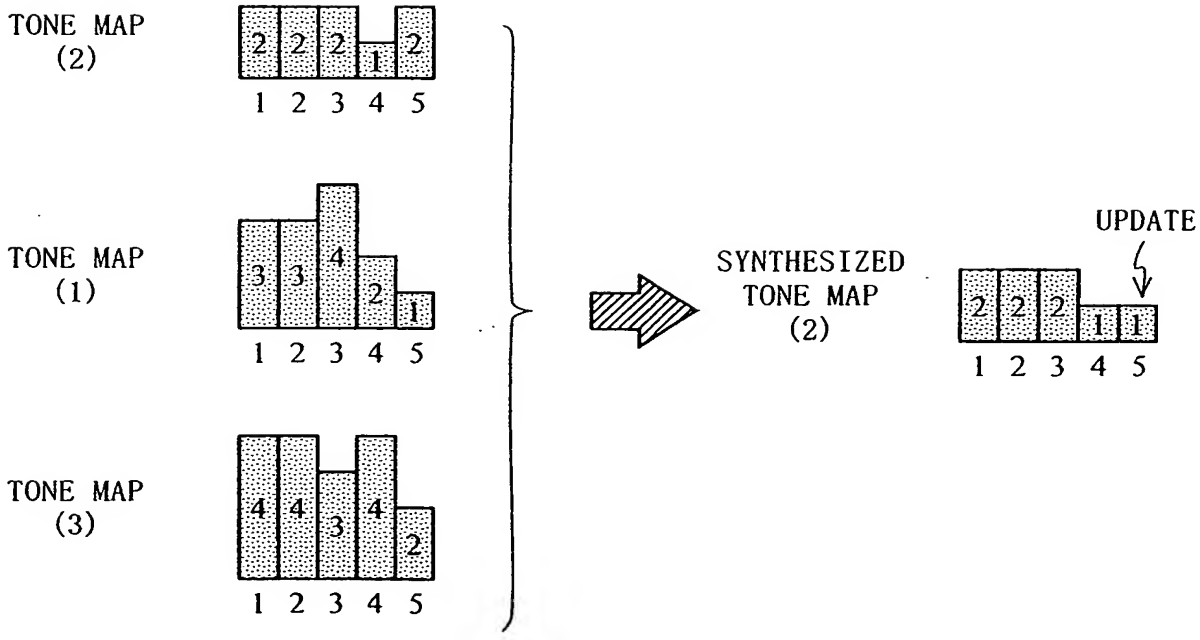

TONE MAP
(2)
2 2 2 1 2
1 2 3 4 5
TONE MAP
(1)
3 3 4 2 1
1 2 3 4 5
TONE MAP
(3)
4 4 3 4 2
1 2 3 4 5
SYNTHESIZED
TONE MAP
(2)
UPDATE
2 2 2 1 1
1 2 3 4 5

FIG. 9

SYNTHESIZED TONE MAP NO.	PHY RATE [Mbps]	TONE MAP EFFECTIVE PERIOD	TOTAL VALUE [Mbits]
1	70	2	140
2	40	3	120
3	100	1	100

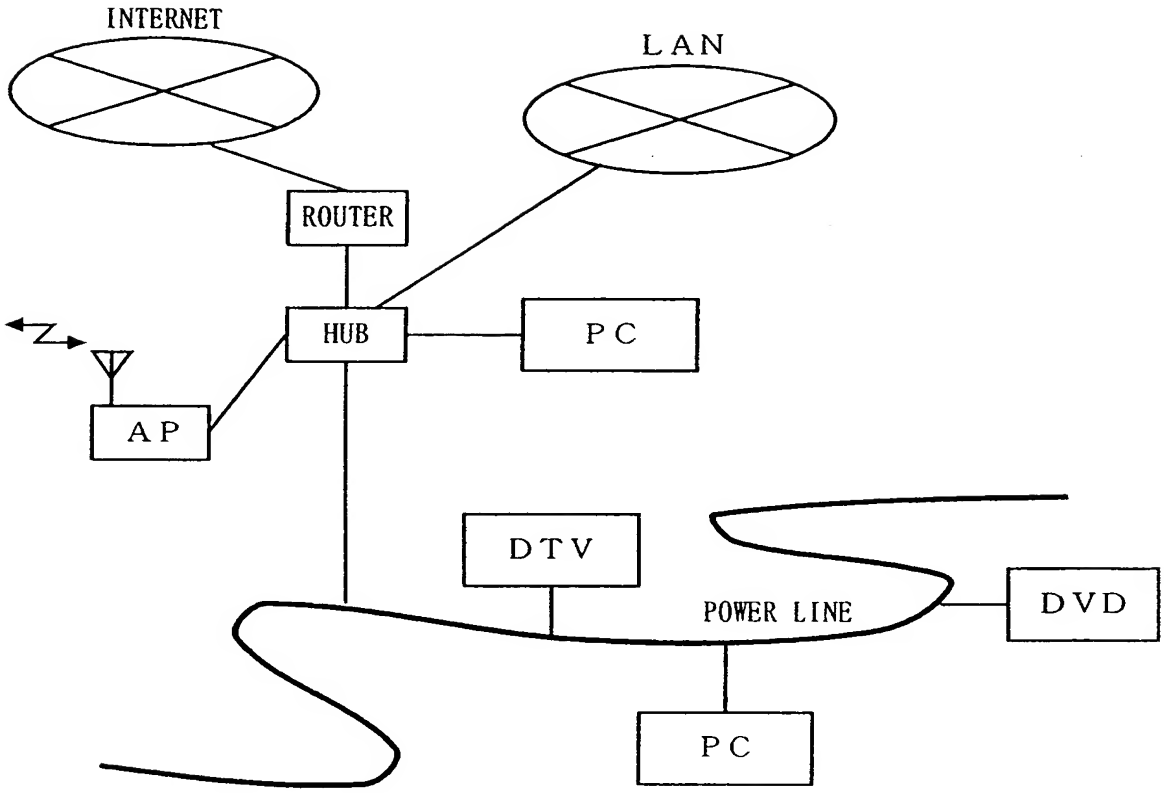



FIG. 10